AMENDMENTS TO THE SPECIFICATION:

Please amend the specification as follows:

Please amend paragraph [0008] to read as follows:

An as-deposited waveguide structure is formed by a vapor deposition process without etching of core material. According to an aspect of the present invention, a planar optical device of a lighthouse design includes a ridge-structured lower cladding layer of a low refractive index material. The ridge-structured lower cladding layer has a planar horizontal surface portion and a ridge portion, the ridge portion extending ~~with~~ a height H ~~extending~~ above the planar horizontal surface portion. The lower cladding layer may optionally overlie a planar substrate such as a silicon wafer.

Please amend paragraph [0021] to read as follows:

FIG. 8 is an SEM image of [[the]] a ridge structure formed by the process [[of]] illustrated in FIG. 7.

Please amend paragraph [0023] to read as follows:

A generic process sequence to form a planar waveguide, according to embodiments of the present invention, is illustrated in the cross sections of FIGS. 1A-1C and the flowchart of FIG. 2. Layer 10 is a layer of a low refractive index material suitable to serve as the lower cladding layer of an optical waveguide or amplifier. Layer 10 may optionally overlie a planar substrate (not shown), such as a silicon wafer. First, at step 25, ridge structures 11, are etched into lower cladding layer 10, for example, using conventional photolithography as shown in FIG. 1A. Next, at step 26, a layer of core material 20, having a higher refractive index than lower cladding layer

10, is deposited over the ridge structured lower cladding layer 10 comprising ridge structures 11. Core layer 20 covers the top surface 16 of ridge structure 11, the sidewall 12 of structure 11 and the horizontal surfaces 14 between structures 11, as in FIG. 1B. As clearly illustrated in FIG. 1B, core layer 20 completely and continuously covers an entire surface of top surface 16, an entire surface of sidewall 12, and an entire surface of each of the horizontal surfaces 14. In the last step 27, an upper cladding layer 30 is deposited over the layer of core material 20, to produce the structure of FIG. 1C.

Please amend paragraph [0038] to read as follows:

For ridge structure 11P having approximately vertical sidewalls making an angle 11B on the order of 90 degrees with the horizontal, a structure such as structure 41 of FIG. 4B is obtained by bias sputtering. Structure 41 includes sidewall layer 20B, the outer surface of which makes the characteristic intermediate angle 20C with the horizontal. Unlike structure 40, ridge structure 11P, including a top surface, sidewalls, and horizontal surfaces between adjacent ridge structures 11P, is continuously covered with core material forming a continuous core material formed on structure 11P, the continuous core material including core layer 22 formed on the top surface, sidewall layer 20B formed on the sidewalls, and slab portion 25 formed on the horizontal surfaces. Structure 41, most frequently[[,]] additionally covered with a top cladding layer, provides an alternative waveguiding structure.